

Notice of Allowability

Application No.

10/755,146

Examiner

William S. Powers

Applicant(s)

DALAL ET AL.

Art Unit

2134

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Request for Continued Examination received 10/25/2006.
2. ☒ The allowed claim(s) is/are 1-28.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

Allowable Subject Matter

Claims 1-28 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: The present invention is directed to a method, apparatus and computer readable medium for preventing a TCP RST network attack. More specifically, independent claims 1, 4, 16, 20-25 recite similar claim language identifying uniquely distinct features: receiving a packet in which an RST bit of a TCP header is set, then determining whether a sequence value in the packet is within a range of allowed sequence values; then if the sequence value is within the range of sequence values, sending an ACK without closing a TCP connection associated with the flow. The closest prior art, as found in AAPA in OpenBSD implementation of TCP under UNIX, discloses a guard against a Reset attack by requiring that the Reset packet carry a sequence number that is exactly the next expected sequence number, and not just within the expected window. If a Reset packet carries a sequence number that is not an exact match, the TCP process ignores the Reset packet and does nothing. However, the OpenBSD implementation does not teach that when the sequence value in the packet containing the Reset bit is within the range of allowed sequence values, sending an acknowledgement message without closing the TCP connection. Further, when the next packet of a flow in which the Reset bit is set comprising a second sequence value in

which the aforementioned value is equal to an expected sequence value, then the TCP connection is closed.

The art considered from the IDS submitted 9/6/2006 does not overcome the reasons for allowance as stated above. Specifically, US Patent Application No. 2002/0101819 is silent to the reset bit and sequence values. As to "Transmission Control Protocol Security Considerations" by Stewart, it would overcome the reasons for allowance, but the instant application was filed before the document was published.

The prior art, taken singly or in combination, fails to anticipate or fairly suggest the limitation of applicant's independent claim, in such a manner that a rejection under 35 USC 102 or 103 would be proper. The claimed invention is therefore considered to be in condition for allowance as being novel and nonobvious over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William S. Powers whose telephone number is 751 272 8573. The examiner can normally be reached on m-f 7:30-5:00.

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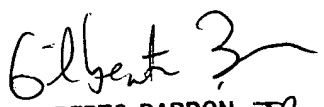
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on 571 272 3799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



11/22/2006

William S. Powers
Examiner
Art Unit 2134



GILBERTO BARRON JR
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TECHNOLOGY CENTER 2100